EFFECTIVENESS OF YOGA NIDRA IN TERMS OF SLEEP QUALITY AND PSYCHOLOGICAL VARIABLES OF PREGNANT WOMEN

SYNOPSIS

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Certificate

I hereby declare that the synopsis EFFECTIVENESS OF YOGA NIDRA IN TERMS OF SLEEP QUALITY AND PSYCHOLOGICAL VARIABLES OF PREGNANT WOMEN being submitted in partial fulfillment of the requirement for the degree of Doctor of Philosophy in Yoga under Department of Yogic Sciences, LNIPE, Gwalior during the academic year 2021-2022.

It is a bonafide record of original work carried out under the supervision of Dr. Megha Sahu and Under the co-supervision of Dr. Arti Yadav has not been submitted in full or part to any other university or institute for a degree or diploma. Further, it is certified that the synopsis is plagiarism-free and the proof has been submitted.

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Abstract

This research will be conducted with the aim to determine if there is a possible relationship between the practice of Yoga Nidra on the sleep quality and psychological variables of pregnant women. 40 pregnant women in the second trimester will be selected from Hisar, Haryana. They will be divided into two groups. Experimental group and control group. Each group will have 20 pregnant women. The age range of the subjects will be from 23 to 35 years. The anxiety, stress and depression levels of the subjects will be measured by ADSS (Anxiety Depression Stress Scale) given by Pallavi Bhatnagar and sleep quality will be measured by PSQI (Pittsburgh Sleep Quality Index).

Keywords -Anxiety, Depression, Pregnant women, Stress, Sleep Quality, Yoga Nidra

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INTRODUCTION

One of the fundamental and unavoidable daily activities that has physiological and social components that impacts people's quality of life and health is sleep. Pregnancy issues can make it difficult for expectant mothers to fall asleep at night. Women today require the most sleep because of the numerous changes they undergo, which causes their bodies to become fatigued easily. It is unknown how common sleep disturbances are in pregnant women, although reports indicate that they begin in the first trimester and peak in the third. In the third trimester of pregnancy, 97% of women experience sleep disturbances(Taskiran, 2011) Most pregnant women notice changes in their sleep patterns. Sleep issues related to the physical changes of pregnancy are frequently mentioned, as are changes in sleep duration and pattern.(Pien & Schwab, 2004)Sleep onset insomnia (20.23%), nocturnal awakening (52.77%), waking too early (18.56%), and feeling their sleep was too shallow (9.82%) were all identified in the study. The third trimester was the most common time for reports of sleep onset insomnia (26.38%) and frequent awakening (62.88%), whereas daytime drowsiness (86.35%) and naps that interfered with daytime functioning (27.18%) were most common. According to the research that is currently available, 46-78% of pregnant women experience sleep difficulties, and their quality of sleep decreases as they approach the third trimester. During the third trimester of pregnancy, sleeplessness affects about 80% of expectant mothers. The research estimates that between 25 and 40 percent of pregnant Polish women experience insomnia, while the overall percentage of sleep disorders ranges from 84.2 to 90.5%.(Smyka et al., 2020)Common issues and sleep disorders that arise during pregnancy: Restless legs syndrome, gastric reflux disease, and obstructive sleep apnea are the most prevalent sleep disorders that frequently arise during pregnancy. Stress, anxiety, and depression during pregnancy are risk factors for unfavorable outcomes for both mothers and their unborn children. Pregnancy anxiety has a negative impact on fetal neurodevelopment and infant outcomes, and it is linked to shorter gestation. Pregnancy-related anxiety is very strong. Pregnancy-related depression symptoms, chronic stress, and racism exposure are linked to lower birth weight babies, which can have an impact on the development of the unborn child.(Dunkel Schetter & Tanner, 2012)In 1976, Swami Satyananda Saraswati created Yoga Nidra, a comparatively simple meditation that may be practiced by anyone from different countries and backgrounds without requiring prior expertise. The core of Yoga Nidra meditation is a personal resolution, or Sankalpa (Sanskrit for "intention, resolution"), that deals with a subject that is significant to the individual and has

a good impact on them. At the start and finish of the meditation, this aim is expressed in a brief, straightforward, and affirming remark (e.g., "I am calm and relaxed" or "I am successful"). The goal of this resolution is to use frequent mental repetition to teach the unconscious how to sustainably reach the desired state. Cognitive restructuring processes are stimulated during meditation, according to studies that used such objectives. Realizing this aim is more significant to frequent Yoga Nidra practitioners than simply relaxing. Nonetheless, allowing the body and mind the chance to release underlying stress requires relaxation. To achieve this, Yoga Nidra includes a methodical series of breathing techniques and body awareness activities that can stimulate the parasympathetic nervous system and raise the brain's alpha-wave levels.(Moszeik et al., 2020)Derived from the tantras, yoga Nidra is a potent technique that teaches you to actively relax. Sleep is not considered relaxation in yoga nidra. When people slump in an easy chair with a cigarette, drink, or cup of coffee, read a newspaper, or turn on the TV, they feel as though they are unwinding. However, this concept of relaxation will never be adequate from a scientific standpoint. These are merely distractions for the senses. In reality, relaxation is an experience that goes well beyond all of this. You must stay conscious if you want complete rest. This is the dynamic sleep condition known as yoga Nidra.(*Yoga Nidra.Pdf - Free Download PDF*, n.d.)When a practitioner achieves an alpha state during yoga nidra, their attention turns to the third eye chakra, or Sahasrara. The pineal gland releases melatonin, a hormone that lowers stress, strengthens the immune system, and helps ward off disease, when it is stimulated. Better mental performance is promoted by regular practice, which helps balance the hemispheres of the brain. Additional fantastic health advantages of yoga Nidra include: -

- Calms the mind
- Relaxes and rejuvenates the body
- Soothes the nervous system
- Reduces fatigue
- Lowers high cholesterol and blood pressure levels
- Strengthens immunity
- Improves quality of sleep
- Treats depression
- Reduces pain
- Boosts concentration level
- Supports brain function and boosts creativity

Statement of the problem

The statement of the problem is stated as "Effectiveness of Yoga Nidra in terms of Sleep Quality and selected Psychological Variables of Pregnant Women".

Objective of the study

- To characterize the level of Sleep Quality of Pregnant Women of Haryana State.
- To characterize the level of Selected Psychological Variable (Stress, Anxiety and Depression) of Pregnant Women of Haryana State.
- To compare pre-test post-test, mean scores of Sleep Quality of Pregnant Women of Haryana State.
- To compare pre-test post-test, mean scores of Selected Psychological Variable (Stress, Anxiety and Depression) of Pregnant Women of Haryana State.
- To find trend among different treatment duration (Test 1, Test 2, Test 3, Test 4 and test 5) of pregnant woman of Haryana.

Delimitations

The study will be delimited to:

- The age of pregnant women will be between 23 to 35 years.
- The subject with the case of twins, special population were excluded.
- The subjects were not having any history of complicated operations, pre-termed labor, repeated abortions.
- The case of over distanced uterus due to presence of excess fluid, problem of liquor hydramnios, low level of placenta line or any serious complication were excluded.
- The subjects with the problem of diabetes or other serious diseases were excluded.
- Selected women belong to 2nd trimester of pregnancy.
- Subjects will be selected from Hissar district of Haryana.

- Subject will be selected from the leading private hospital (Sukhda hospital, Sharda hospital, Aakash hospital) of Hissar systematic sampling.

Limitations

- Eating behavior, daily routine, lifestyle, genetic makeup, metabolism, are beyond the control of the researcher.
- Socio-economic status, religious and cultural background is also beyond the control of the researcher.
- Regular practice of yoga over the past 3 months.

Hypothesis of the study

- There will be no significant difference between the pre-test post-test mean scores of Sleep Quality of Pregnant Women of Haryana State.
- There will be no significant difference between the pre-test post-test mean scores of Selected Psychological Variable (Stress, Anxiety and Depression) of Pregnant Women of Haryana State.
- There will be no significant difference in trend among different treatment duration (Test 1, Test 2, Test 3, Test 4 and test 5) of pregnant woman of Haryana.

Definition/Explanation of important Terms

Sleep quality- A person's happiness with their sleep experience, combining elements of sleep initiation, maintenance, quantity, and awakening refreshment, is referred to as their sleep quality.

Stress - Stress is defined as a specific relationship between an individual and their surroundings that is evaluated by the individual by putting their wellbeing at risk and demanding or surpassing their resources.

Stress is a person's physical and emotional response to situations that are deemed tough or difficult.

Anxiety- Anxiety is described as "a painful or apprehensive uneasiness of mind usually over an impending or anticipated ill".

Depression- A persistent mental illness, depression alters a person's emotions, thoughts, behavior, and physical health

Yoga Nidra- Nidra, which means sleep, and yoga, which means union or inner communication, are two distinct yogic practices. Often referred to as "yogic sleep," this straightforward yet effective method involves methodical physical, mental, and emotional relaxation. Since one appears to be asleep but is still conscious, it is frequently referred to as psychic sleep or deep relaxation with inner consciousness.

REVIEW OF RELATED LITERATURE

By calming your body and mind, yoga nidra, also known as deep relaxation, helps you refuel. It is said that an hour of yoga nidra is just as rejuvenating as four hours of sleep. There is some evidence and a widespread perception that yoga can be beneficial. increase your body awareness, manage fatigue and sleep deprivation, unwind and lower stress and worry, gain mental clarity and focus, manage labor pain, and lessen nausea. This will help you maintain your optimistic attitude during your pregnancy. In a vast and varied sample, this experimental investigation demonstrated minor effects of a brief online and audio-guided Yoga Nidra meditation on stress, sleep, and overall well-being. The benefits of yoga can be readily experienced through meditation without any prior knowledge or the need for more or less challenging body-related exercises, particularly during stressful workdays and to support work-life balance. Our research demonstrates that in order to lower stress and improve wellbeing and sleep quality, expensive day programs requiring significant time, staff, and structural resources are not always necessary. Even this brief version of Yoga Nidra appears to be beneficial in bringing the mind's autopilot to a halt so that the wonderful instant in which reality occurs can be seen. Upon reasonable request, the corresponding author will make the dataset created and analysed during the current work available.(Moszeik et al., 2020)

Most pregnant women experience sleep issues. Obstructive sleep apnea, insomnia, restless legs syndrome, and nighttime gastric reflux illness are the most prevalent sleep-related conditions during pregnancy. A self-created survey with questions was given out. It was made up of items taken from a number of validated surveys, including the Berlin Questionnaire, Stanford Sleep Questionnaire, Insomnia Severity Index, and PSQI. Google Forms (Google LLC, Mountain View, California, US) was used to conduct the survey. According to the research that is currently available, 46-78% of pregnant women experience sleep difficulties. During the first, second, and third trimesters of pregnancy, 71.8%, 73.6%, and 80.6% of women, respectively, reported having sleep issues.9.82% of women who reported having sleep disorders thought their sleep was too shallow, 18.56% woke up too early, and 20.23% said their primary issue was sleep onset insomnia. Nocturnal awakening proved to be the most prevalent sleep disturbance. cited by 52.77% of females. Pregnant women frequently experience sleep issues, which become much more common as the pregnancy goes on(Smyka et al., 2020).

investigated how women who practiced prenatal yoga and those who received standard prenatal care changed their salivary biomarkers for stress and immunity between weeks 16 and 36 of pregnancy. Clinostat block randomization was used to randomly assign participants to either the intervention (n = 48) or control (n = 46) groups. The control group got only standard prenatal care during the 20-week intervention, which included two weekly 70-minute yoga sessions conducted by a midwife licensed as a yoga instructor. Prenatal yoga significantly improved the immune system and decreased stress in expectant mothers.(Gong et al., 2015)

Siddhas are well-versed in fetal development and embryological growth. They have given pregnant women dos and don'ts. All of the yogams that Siddhas suggest are good for expectant mothers. For a woman and her family, being pregnant is a unique time. Pregnant women who practice yoga appear to be reflecting this beneficial health effect on the fetus inside their womb. Pregnant women who practice yoga will have better posture, more spinal flexibility, better breathing, and better stress management. The current study concludes by recommending that a prenatal yoga program.(Devi, 2015)

Preclinical research has shown that pregnancy and trimester-specific alterations in sleep architecture may be linked to metabolic dysfunction, and in recent years, shorter sleep duration has drawn a lot of attention. Increased daytime drowsiness and overall sleep duration are frequently linked to the first trimester. These alterations could be partially explained by rising hormone levels during this time. The majority of nightly awakenings during the second trimester are caused by nocturia. More frequent urination results from bladder compression brought on by growing uterine size. Sleep may be further disrupted by additional reasons including heartburn and growing fetal movements. Physical changes that occur during the third trimester can make it difficult to get asleep and stay asleep.(O'Keeffe & St-Onge, 2013)

According to recent research, it might help with the outcomes of pregnancy, labor, and delivery. The results reveal that yoga is beneficial for pregnant women and improves a number of other conditions. For example, fetal exposure to maternal stress and stress-related peptides increases the likelihood of negative effects on the nervous system's programming and the morphology of the fetus, newborn, and child's brain.(Curtis et al., 2012)

The purpose of this study was to assess pregnant women's sleep quality and identify the contributing factors. One hundred healthy expectant mothers who applied to the

gynaecological clinic at Ahmet Necdet Sezer University's Research and Practice Hospital participated in the study. the information gathered through in-person interviews. The Pittsburgh Sleep Quality Index (PSQI), the Berlin Sleep Questionnaire for sleep apnea risk, and the Epworth drowsiness Scale for drowsiness were used to assess the quality of sleep. It was discovered that 86% of the pregnant women in our study had poor sleep quality. Pregnancy-related illnesses were found to be correlated with age, obesity, frequency of doctor visits, and sleep quality in pregnant women.(Taskiran, 2011)

The effectiveness of yoga on pregnancy outcomes was investigated. In a prospective, matched, observational trial, 335 women who were registered between weeks 18 and 20 of pregnancy at the antenatal clinic at Gunasheela Surgical and Maternity Hospital in Bangalore, India, were divided into two groups: 169 women in the yoga group and 166 women in the control group. It is safe to practice yoga as part of an integrated approach while pregnant. Whether used alone or in conjunction with PIH, it reduces IUGR, improves birth weight, and lessens preterm labor without causing more problems.(Narendran et al., 2005)

Most pregnant women notice changes in their sleep patterns. Sleep issues related to the physical changes of pregnancy are frequently mentioned, as are changes in sleep duration and pattern. Pregnant women may be more susceptible to certain sleep disorders such obstructive sleep apnea and restless legs syndrome (RLS) due to the physiological and biochemical changes that occur during pregnancy. Sleep disturbances during the first trimester are frequently linked to complaints of exhaustion or nausea and vomiting. Total nocturnal sleep time decreases toward the end of the second trimester (23–24 weeks gestation). The prevalence of restless sleep and sleep problems rises even if the percentage of slow-wave sleep is significantly higher than it was in the first trimester. The majority of women report having different sleep patterns throughout the third trimester. In the third trimester of pregnancy, only 1.9% of women do not have nocturnal awakenings.(Pien & Schwab, 2004)

METHODOLOGY

This chapter will describe the Design of the study, Selection of subjects, Selection of variables, Tools of data collection, Data collection, Yoga Nidra protocol for 2nd trimesters.

Design of the study

An experimental design will be implemented, to evaluate the effectiveness of Yoga Nidra in terms of Sleep Quality and selected Psychological Variables of Pregnant Women. To serve the purpose, two group with N=40.

For sleep quality and psychological variables

For the experimental group –

O1 ⇨ NO T. ⇨ O2 ⇨ T. ⇨ O3 ⇨ T. ⇨ O4 ⇨ NO.T. ⇨ O5

Fore the control grouo –

Observations were done five times but treatment was not given during any of the observations.

Observation will be taken in every 3 weeks.

O = Observation

T = Treatment

NO. T = No Treatment

Selection of subjects

To fulfil the objective, 40 pregnant women of Haryana state aged 23-35 years will be recruited. Also, the total sample will include 40 pregnant women who have no prior experience of yoga, out of the total sample, 20 samples will be placed in the experimental group and 20 will be placed in the control group.

Selection of variables

Independent variables-

√ Yoga Nidra

Dependent variables

√ Sleep quality during pregnancy

√ Psychological Variables

- Stress
- Anxiety
- Depression

Tools of data collection

Two questionnaires will be used to collect data on sleep quality and psychological variables.

- **PSQI –** Pittsburgh sleep quality index was used to measure sleep quality
- **ADSS –** Anxiety, depression and stress scale

Data collection

The data will be collected based on questionnaire for every factor which is going to affect the Sleep Quality and psychological variable during pregnancy. There will be total of 2 questionnaires. Questionnaire will be given to each participant of experimental group and control group at a gap of three weeks since the intervention started for 3 months in continuation, and gets the questionnaire filled by them for 5 times.

Intervention protocol for Second Trimesters

√ Yoga Nidra

The intervention will be carried out for 12 weeks. The training would be given for 5 days a week. Intervention will be given of 25-40 minutes. The intervention will include proper positioning, retaining and relaxation phases according to the capability of the subjects.

Statistical techniques

Statistical techniques will be used according to the nature of data.

Expected Outcome of the research

This study is going to contribute to the improvement of sleep quality and psychological variable among pregnant women with the Yoga Nidra. Through this research, we will be able to know whether Yoga Nidra will improve those factors that reduces the Sleep Quality and psychological variable during pregnancy.

REFERENCES

Curtis, K., Weinrib, A., & Katz, J. (2012). Systematic Review of Yoga for Pregnant Women: Current Status and Future Directions. *Evidence-Based Complementary and Alternative Medicine*, *2012*, e715942. https://doi.org/10.1155/2012/715942

Devi, M. S. S. (2015). *M. Kannan*, P Sathiya Rajeswaran, S Natarajan, R Vasudevan, S D Muralidass,*. 7.

Dunkel Schetter, C., & Tanner, L. (2012). Anxiety, depression and stress in pregnancy: Implications for mothers, children, research, and practice. *Current Opinion in Psychiatry*, *25*(2), 141–148. https://doi.org/10.1097/YCO.0b013e3283503680

Gong, H., Ni, C., Shen, X., Wu, T., & Jiang, C. (2015). Yoga for prenatal depression: A systematic review and meta-analysis. *BMC Psychiatry*, *15*(1), 14. https://doi.org/10.1186/s12888-015-0393-1

Moszeik, E. N., von Oertzen, T., & Renner, K.-H. (2020). Effectiveness of a short Yoga Nidra meditation on stress, sleep, and well-being in a large and diverse sample. *Current Psychology*. https://doi.org/10.1007/s12144-020-01042-2

Narendran, S., Nagarathna, R., Narendran, V., Gunasheela, S., & Nagendra, H. R. R. (2005). Efficacy of Yoga on Pregnancy Outcome. *The Journal of Alternative and Complementary Medicine*, *11*(2), 237–244. https://doi.org/10.1089/acm.2005.11.237

O'Keeffe, M., & St-Onge, M.-P. (2013). Sleep duration and disorders in pregnancy: Implications for glucose metabolism and pregnancy outcomes. *International Journal of Obesity (2005)*, *37*(6), 10.1038/ijo.2012.142. https://doi.org/10.1038/ijo.2012.142

Pien, G. W., & Schwab, R. J. (2004). *Sleep Disorders During Pregnancy*. *27*(7), 13.

Smyka, M., Kosińska-Kaczyńska, K., Sochacki-Wójcicka, N., Zgliczyńska, M., & Wielgoś, M. (2020). Sleep Problems in Pregnancy—A Cross-Sectional Study in over 7000 Pregnant Women in Poland. *International Journal of Environmental Research and Public Health*, *17*(15), Article 15. https://doi.org/10.3390/ijerph17155306

Taskiran, N. (2011). Pregnancy and Sleep Quality. *Journal of Turkish Society of Obstetric and Gynecology*, *8*(3), 181–187. https://doi.org/10.5505/tjod.2011.14880

Yoga Nidra.pdf—Free Download PDF. (n.d.). Retrieved June 2, 2022, from https://kupdf.net/download/yoga-nidra-pdf_58e21bffdc0d6090208970d7_pdf